

IPG-3901

Release History

Release Version	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
2.4.3	2.4.3	2.4.3	2018-11-06	M3036-9900-240
2.4.2	2.4.2	2.4.2	2018-09-28	M3036-9900-240
2.4.0	2.4.0	2.4.0	2018-08-28	M3036-9900-240
2.3.2	2.3.2	2.3.2	2018-05-21	M3036-9900-231
2.3.1	2.3.1	2.3.1	2018-03-02	M3036-9900-231
2.2.3	2.2.3	2.2.3	2017-11-03	M3036-9900-223
2.2.1	2.2.1	2.2.1	2017-06-22	M3036-9900-221
2.2.0	2.2.0	2.2.0	2017-06-09	M3036-9900-134
2.1.0	2.1.0	2.1.0	2017-03-31	M3036-9900-134
2.0.0	2.0.0	2.0.0	2017-02-24	M3036-9900-134
1.3.4	1.3.4	1.3.4	2016-10-04	M3036-9900-134
1.3.3	1.3.3	1.3.3	2016-08-24	M3036-9900-132
1.3.2	1.3.2	1.3.2	2016-07-07	M3036-9900-132
1.2.0	1.2.0	1.2.0	2016-04-29	M3036-9900-120
1.1.0	1.1.0	1.1.0	2016-02-26	M3036-9900-110

NOTES: The iControl compatibilities shown below are officially supported by Grass Valley. Earlier versions may also work, with bugs or limited features.

The Reference number (Ref#) given for each feature or bug in these Release Notes refers to internal Grass Valley documentation.

WARNINGS

<p>STAR-2927</p>	<p>Restore point of IPG-3901 1.x.x not compatible with IPG-3901 2.2.0 and up</p> <p>Loading a restore point from an old version to this new release, may cause problems in the iControl panel.</p> <p>Workaround: Disable the restore point feature before upgrading to 2.2.x. after a successful upgrade, save a new restore point and enable back the feature.</p>
<p>STAR-3197</p>	<p>iControl service 2.2.1 is not compatible with firmware 2.2.3</p> <p>IPG-3901 with firmware version 2.2.3 will not work with iControl service 2.2.1.</p> <p>Workaround : upgrade the iControl service to 2.2.3</p>
<p>STAR-3418</p>	<p>Downgrade from 2.3.1 to 2.x.x doesn't free up TICO Streams</p> <p>Downgrading from 2.3.0 to 2.x.x doesn't automatically release TICO Streams</p> <p>Workaround: Release TICO Streams while in 2.3.0 version and then downgrade to 2.x.x version</p>

UPGRADE PACKAGE: 2.4.3

Firmware version: [2.4.3.41](#)

Release date: [2018-11-06](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Official Release](#)

BUGFIXES

Ref#	Description
STAR-3884	<p>IPG-3901s are losing income stream connections</p> <p>In a specific installation, it was noted that a stream state will fluctuate before entering a permanently failed state.</p> <p>Issue identified as related to IGMP or ping traffic. Fix also adds low-level Ethernet robustness and address an additional packet-size issue.</p>
STAR-3920	<p>When Grandmaster PTP is lost and regained (no redundancy mode), IPG-3901 PTP will not recover until Domain number is adjusted</p> <p>When Grandmaster PTP is lost without redundancy, IPG PTP will not recover until Domain number is manually adjusted.</p> <p>A low-level buffer's logic regarding full and contained-data values traced as source of issue. Its state is now managed correctly.</p>
STAR-3900	<p>SMPTE 2022-6 QoS should default to 34</p> <p>Differentiated services field (DS field) in the IP header for packet classification purpose, now defaults to same value as AES67: AF41(DSCP 34). Does not affect existing values, just new installations or factory resets.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
<p>Limitations</p>	<p>Active TICO Model</p> <p>“Active TICO Model” is not managed by: Factory default, User presets, Profiles and Restore point.</p> <p>If you want to use restore point feature to configure a new card, you may have to change manually the Active TICO model manually and re-enable your gateways manually</p>
<p>STAR-3476</p>	<p>TICO 1 – MON & TICO 2 – MON not operational</p> <ol style="list-style-type: none"> TICO 1 – MON Gateway needs Video sender of TICO 1 – ENC to be enabled to be operational TICO 2 – MON Gateway needs Video sender of TICO 2 – ENC to be enabled to be operational <p><u>Workaround:</u> To only Stream TICO – MON, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3397</p>	<p>TICO 1 – ENC & TICO 1 – ENC Statuses</p> <ol style="list-style-type: none"> TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant <p><u>Workaround:</u> To monitor TICO inputs without Streaming, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3410</p>	<p>Video and audio need to come from same ETH port in aggregation</p> <p>In group sync mode (TR04), SMPTE 2022-6 and AES-67 need to be received on the same ETH interface</p>

<p>STAR-1761 STAR-3487</p>	<p>Test Pattern will disrupt TICO encoders and decoders</p> <p>When using TICO, clicking "Force ALL" check box on the test pattern panel will put the TICO encoders and decoders on errors. Also enabling test pattern for SDI inputs and outputs used for the TICO before enabling TICO encoder or decoder will put the TICO encoder or decoders on errors</p> <p>Workaround: When using the TICO option, do not hit the "Force ALL" check box on the test pattern panel. Also disable test pattern checkbox from corresponding gateways before enabling TICO encoder or Decoder</p>
<p>Requirement</p>	<p>Alignment in Group sync needs SMPTE 2022-6 RTP timestamp to follow PTP</p> <p>Group Sync mode only works if SMPTE 2022-6 RTP timestamps are synced and phased to PTP.</p>
<p>STAR-3243</p>	<p>IP transmitter stops working after a Restore point</p> <p>After a restore point, transmitters stop working and stream statuses don't flag the problem.</p> <p>Workaround: Disable and enable the transmitter to fix the problem.</p>
<p>STAR-2668</p>	<p>Asynchronous SMPTE 2022-6 not supported by the IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 needs to be synchronous to the selected reference. Possible reference signals are an external reference (NTSC or PAL black burst) or the URS signal.</p>
<p>STAR-2898 STAR-2910</p>	<p>IP-to-SDI DA mode limitations</p> <ol style="list-style-type: none"> 1. DA mode doesn't work with bursty sources 2. DA mode is limited to 5 SDI outputs
<p>STAR-2875</p>	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked. When there is no valid PTP, the values reported should be N/A.</p>
<p>STAR-2572</p>	<p>Output on error Slate might not be phased to reference</p> <p>Slate is phased to the reference only when SMPTE 2022-6 receiver is enabled</p>

STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP stream (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
STAR-2712	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
STAR-2732	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 only works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream.</p>
STAR-2664 STAR-3222	<p>Test Pattern Limitations</p> <ol style="list-style-type: none"> 1. SDI Output timing control is ignored when test pattern is enabled. 2. Enabling Test Pattern will generate SDI output errors.
STAR-2555	<p>Test Tone limitations</p> <ol style="list-style-type: none"> 1. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream. 2. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.

<p>STAR-2703</p>	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problem occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p><u>Workaround:</u></p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
<p>STAR-2607</p>	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the "Str. Address", "Str. Port" or "iGMPv3 Source" settings of the received stream from ETH1 will affect the SDI output.</p> <p><u>Workaround:</u> Change settings of ETH1 stream offline.</p>
<p>STAR-2672</p>	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 don't have the same Sequence number. So to be compliant with SMPTE ST 2022-7, both sender and receivers must be of version 2.0.0 or later.</p>
<p>STAR-2396</p>	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled.</p> <p><u>Workaround:</u> Lock the IPG-3901 on the external reference or URS.</p>
<p>STAR-1950</p>	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable.</p> <p><u>Workaround:</u> use a reference, black burst or URS.</p>

<p>STAR-1749</p>	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default.</p> <p><u>Workaround:</u> Apply the factory default to the "Card parameters" first followed by "Network settings"</p>
<p>STAR-1703</p>	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
<p>STAR-1754</p>	<p>DUM Upgrade (Through media port ETH1) works only from 1.2.0 to a newer version</p> <p>Using Densité Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older versions including 1.2.0 after this upgrade.</p> <p><u>Workaround:</u> Users looking to downgrade to a version older than 1.2 can still manually update the SD card to the required version. To upgrade the SD card, refer to the manual.</p>
<p>STAR-1755</p>	<p>Firmware upgrade needs a network path between the upgrading computer and the ETH1 port of the upgraded card</p> <p>For cards that are NOT in an "advanced frame" (see definition below), a firmware upgrade with the Densité Upgrade Manager (DUM) can only be done through the ETH1 media port.</p> <p>So a network path is required between the computer doing the upgrade and the ETH1 port of the card being upgraded. Refer to Annex 1 of the manual. The term "advanced frame" means either:</p> <ol style="list-style-type: none"> 1. GV Node 2. "Densité 3+ FR4" <u>WITH</u> a "DENSITE 3+ FR4 ADV" frame controller
<p>DSERV-2031</p>	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p><u>Workaround:</u> Users should update the IPG-3901 to version 1.3.2 or higher and also ensure that the latest XIO-4901 service is installed.</p>

UPGRADE PACKAGE: 2.4.2

Firmware version: [2.4.2.30](#)

Release date: [2018-09-28](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Official Release](#)

BUGFIXES

Ref#	Description
STAR-3884	<p>IPG-3901s are losing income stream connections</p> <p>I user noted that a stream state will fluctuate before entering a permanently failed state.</p> <p>Issue identified as related to IGMP or ping traffic and then ticket IPFRMK-1414. Fix copied across to IPG FPGA.</p>
STAR-3866	<p>IPG3901 keeps losing PTP. It unlocks randomly and cannot refresh itself.</p> <p>Customers experienced a PTP stability issue where the PTP lock could be randomly lost.</p> <p>Update to PTP Firmware/FPGA to correct a bug that could set a PTP delay value to zero and not be recoverable.</p>
STAR-3881	<p>IPG-3901 are losing PTP lock</p> <p>Ticket a duplicate of STAR-3866.</p>
STAR-3830	<p>One of the 4K SDI links disconnected while IPG in 4K TICO ENC mode</p> <p>A customer experienced an occasional loss of the 4th input to a TICO Encoder. Without information to reproduce the issue, we have made a minor change within the FPGA that theoretically may improve this area, and added logging of FPGA registers to assist further investigation.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
<p>Limitations</p>	<p>Active TICO Model</p> <p>“Active TICO Model” is not managed by: Factory default, User presets, Profiles and Restore point.</p> <p>If you want to use restore point feature to configure a new card, you may have to change manually the Active TICO model manually and re-enable your gateways manually</p>
<p>STAR-3476</p>	<p>TICO 1 – MON & TICO 2 – MON not operational</p> <ul style="list-style-type: none"> 3. TICO 1 – MON Gateway needs Video sender of TICO 1 – ENC to be enabled to be operational 4. TICO 2 – MON Gateway needs Video sender of TICO 2 – ENC to be enabled to be operational <p><u>Workaround:</u> To only Stream TICO – MON, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3397</p>	<p>TICO 1 – ENC & TICO 1 – ENC Statuses</p> <ul style="list-style-type: none"> 3. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant 4. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant <p><u>Workaround:</u> To monitor TICO inputs without Streaming, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3410</p>	<p>Video and audio need to come from same ETH port in aggregation</p> <p>In group sync mode (TR04), SMPTE 2022-6 and AES-67 need to be received on the same ETH interface</p>

<p>STAR-1761 STAR-3487</p>	<p>Test Pattern will disrupt TICO encoders and decoders</p> <p>When using TICO, clicking "Force ALL" check box on the test pattern panel will put the TICO encoders and decoders on errors. Also enabling test pattern for SDI inputs and outputs used for the TICO before enabling TICO encoder or decoder will put the TICO encoder or decoders on errors</p> <p>Workaround: When using the TICO option, do no hit the "Force ALL" check box on the test pattern panel. Also disable test pattern checkbox from corresponding gateways before enabling TICO encoder or Decoder</p>
<p>Requirement</p>	<p>Alignment in Group sync needs SMPTE 2022-6 RTP timestamp to follow PTP</p> <p>Group Sync mode only works if SMPTE 2022-6 RTP timestamps are synced and phased to PTP.</p>
<p>STAR-3243</p>	<p>IP transmitter stops working after a Restore point</p> <p>After a restore point, transmitters stop working and stream statuses don't flag the problem.</p> <p>Workaround: Disable and enable the transmitter to fix the problem.</p>
<p>STAR-2668</p>	<p>Asynchronous SMPTE 2022-6 not supported by the IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 needs to be synchronous to the selected reference. Possible reference signals are an external reference (NTSC or PAL black burst) or the URS signal.</p>
<p>STAR-2898 STAR-2910</p>	<p>IP-to-SDI DA mode limitations</p> <ul style="list-style-type: none"> 3. DA mode doesn't work with bursty sources 4. DA mode is limited to 5 SDI outputs
<p>STAR-2875</p>	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked. When there is no valid PTP, the values reported should be N/A.</p>
<p>STAR-2572</p>	<p>Output on error Slate might not be phased to reference</p> <p>Slate is phased to the reference only when SMPTE 2022-6 receiver is enabled</p>

STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP stream (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
STAR-2712	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
STAR-2732	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 only works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream.</p>
STAR-2664 STAR-3222	<p>Test Pattern Limitations</p> <ol style="list-style-type: none"> 3. SDI Output timing control is ignored when test pattern is enabled. 4. Enabling Test Pattern will generate SDI output errors.
STAR-2555	<p>Test Tone limitations</p> <ol style="list-style-type: none"> 3. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream. 4. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.

<p>STAR-2703</p>	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problem occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p><u>Workaround:</u></p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
<p>STAR-2607</p>	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the "Str. Address", "Str. Port" or "iGMPv3 Source" settings of the received stream from ETH1 will affect the SDI output.</p> <p><u>Workaround:</u> Change settings of ETH1 stream offline.</p>
<p>STAR-2672</p>	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 don't have the same Sequence number. So to be compliant with SMPTE ST 2022-7, both sender and receivers must be of version 2.0.0 or later.</p>
<p>STAR-2396</p>	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled.</p> <p><u>Workaround:</u> Lock the IPG-3901 on the external reference or URS.</p>
<p>STAR-1950</p>	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable.</p> <p><u>Workaround:</u> use a reference, black burst or URS.</p>

<p>STAR-1749</p>	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default.</p> <p><u>Workaround:</u> Apply the factory default to the "Card parameters" first followed by "Network settings"</p>
<p>STAR-1703</p>	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
<p>STAR-1754</p>	<p>DUM Upgrade (Through media port ETH1) works only from 1.2.0 to a newer version</p> <p>Using Densité Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older versions including 1.2.0 after this upgrade.</p> <p><u>Workaround:</u> Users looking to downgrade to a version older than 1.2 can still manually update the SD card to the required version. To upgrade the SD card, refer to the manual.</p>
<p>STAR-1755</p>	<p>Firmware upgrade needs a network path between the upgrading computer and the ETH1 port of the upgraded card</p> <p>For cards that are NOT in an "advanced frame" (see definition below), a firmware upgrade with the Densité Upgrade Manager (DUM) can only be done through the ETH1 media port.</p> <p>So a network path is required between the computer doing the upgrade and the ETH1 port of the card being upgraded. Refer to Annex 1 of the manual. The term "advanced frame" means either:</p> <ol style="list-style-type: none"> 3. GV Node 4. "Densité 3+ FR4" <u>WITH</u> a "DENSITE 3+ FR4 ADV" frame controller
<p>DSERV-2031</p>	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p><u>Workaround:</u> Users should update the IPG-3901 to version 1.3.2 or higher and also ensure that the latest XIO-4901 service is installed.</p>

UPGRADE PACKAGE: 2.4.0

Firmware version: [2.4.0.26](#)

Release date: [2018-08-28](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Official Release](#)

BUGFIXES

Ref#	Description
STAR-3659	<p>Unable to disable the PTP alarm</p> <p>A user that didn't require the use of PTP had unavoidable alarm reporting issues with it. It should be possible to disable this alarm, otherwise the IPG will always report a critical card LED alarm for PTP, potentially hiding genuine issues.</p> <p>Note:</p> <ul style="list-style-type: none"> • Full PTP Status Disabling is achieved through both the new Enable PTP Status Reporting checkbox (Reference > PTP Page) and setting all the PTP alarms to disabled (Alarm Config Page). • Some element of PTP functionality will continue to run even when status reporting is disabled. The Alarm config Global PTP Locked status will continue to be accurate.

KNOWN BUGS & LIMITATIONS

Ref #	Description
<p>Limitations</p>	<p>Active TICO Model</p> <p>“Active TICO Model” is not managed by: Factory default, User presets, Profiles and Restore point.</p> <p>If you want to use restore point feature to configure a new card, you may have to change manually the Active TICO model manually and re-enable your gateways manually</p>
<p>STAR-3476</p>	<p>TICO 1 – MON & TICO 2 – MON not operational</p> <ul style="list-style-type: none"> 5. TICO 1 – MON Gateway needs Video sender of TICO 1 – ENC to be enabled to be operational 6. TICO 2 – MON Gateway needs Video sender of TICO 2 – ENC to be enabled to be operational <p><u>Workaround:</u> To only Stream TICO – MON, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3397</p>	<p>TICO 1 – ENC & TICO 1 – ENC Statuses</p> <ul style="list-style-type: none"> 5. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant 6. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant <p><u>Workaround:</u> To monitor TICO inputs without Streaming, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3410</p>	<p>Video and audio need to come from same ETH port in aggregation</p> <p>In group sync mode (TR04), SMPTE 2022-6 and AES-67 need to be received on the same ETH interface</p>

<p>STAR-1761 STAR-3487</p>	<p>Test Pattern will disrupt TICO encoders and decoders</p> <p>When using TICO, clicking "Force ALL" check box on the test pattern panel will put the TICO encoders and decoders on errors. Also enabling test pattern for SDI inputs and outputs used for the TICO before enabling TICO encoder or decoder will put the TICO encoder or decoders on errors</p> <p>Workaround: When using the TICO option, do no hit the "Force ALL" check box on the test pattern panel. Also disable test pattern checkbox from corresponding gateways before enabling TICO encoder or Decoder</p>
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<p>STAR-3243</p>	<p>IP transmitter stops working after a Restore point</p> <p>After a restore point, transmitters stop working and stream statuses don't flag the problem.</p> <p>Workaround: Disable and enable the transmitter to fix the problem.</p>
<p>STAR-2668</p>	<p>Asynchronous SMPTE 2022-6 not supported by the IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 needs to be synchronous to the selected reference. Possible reference signals are an external reference (NTSC or PAL black burst) or the URS signal.</p>
<p>STAR-2898 STAR-2910</p>	<p>IP-to-SDI DA mode limitations</p> <ul style="list-style-type: none"> 5. DA mode doesn't work with bursty sources 6. DA mode is limited to 5 SDI outputs
<p>STAR-2875</p>	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked. When there is no valid PTP, the values reported should be N/A.</p>
<p>STAR-2572</p>	<p>Output on error Slate might not be phased to reference</p> <p>Slate is phased to the reference only when SMPTE 2022-6 receiver is enabled</p>

STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP stream (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
STAR-2712	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
STAR-2732	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 only works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream.</p>
STAR-2664 STAR-3222	<p>Test Pattern Limitations</p> <ol style="list-style-type: none"> 5. SDI Output timing control is ignored when test pattern is enabled. 6. Enabling Test Pattern will generate SDI output errors.
STAR-2555	<p>Test Tone limitations</p> <ol style="list-style-type: none"> 5. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream. 6. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.

<p>STAR-2703</p>	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problem occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p><u>Workaround:</u></p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
<p>STAR-2607</p>	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the "Str. Address", "Str. Port" or "iGMPv3 Source" settings of the received stream from ETH1 will affect the SDI output.</p> <p><u>Workaround:</u> Change settings of ETH1 stream offline.</p>
<p>STAR-2672</p>	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 don't have the same Sequence number. So to be compliant with SMPTE ST 2022-7, both sender and receivers must be of version 2.0.0 or later.</p>
<p>STAR-2396</p>	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled.</p> <p><u>Workaround:</u> Lock the IPG-3901 on the external reference or URS.</p>
<p>STAR-1950</p>	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable.</p> <p><u>Workaround:</u> use a reference, black burst or URS.</p>

STAR-1749	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default.</p> <p><u>Workaround:</u> Apply the factory default to the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade (Through media port ETH1) works only from 1.2.0 to a newer version</p> <p>Using Densité Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older versions including 1.2.0 after this upgrade.</p> <p><u>Workaround:</u> Users looking to downgrade to a version older than 1.2 can still manually update the SD card to the required version. To upgrade the SD card, refer to the manual.</p>
STAR-1755	<p>Firmware upgrade needs a network path between the upgrading computer and the ETH1 port of the upgraded card</p> <p>For cards that are NOT in an "advanced frame" (see definition below), a firmware upgrade with the Densité Upgrade Manager (DUM) can only be done through the ETH1 media port.</p> <p>So a network path is required between the computer doing the upgrade and the ETH1 port of the card being upgraded. Refer to Annex 1 of the manual. The term "advanced frame" means either:</p> <ol style="list-style-type: none"> 5. GV Node 6. "Densité 3+ FR4" <u>WITH</u> a "DENSITE 3+ FR4 ADV" frame controller
DSERV-2031	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p><u>Workaround:</u> Users should update the IPG-3901 to version 1.3.2 or higher and also ensure that the latest XIO-4901 service is installed.</p>

UPGRADE PACKAGE: 2.3.2

Firmware version: [2.3.2.20](#)

Release date: [2018-05-23](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Official Release](#)

BUGFIXES

Ref#	Description
STAR-3572	<p>User that hasn't bought TICO option is blocked with ENC DEC FPGA load</p> <p>A user that didn't purchase the TICO option is blocked with an FPGA load that will do less than 5 gateways per port on each direction! Firmware should load "No TICO" when no TICO option is active.</p>
STAR-3615	<p>Master ID Field Too Narrow</p> <p>A customer is using an ID larger than the current text-edit control. We should stretch the controls a little wider to accommodate the maximum "11:22:33:FF:FE:44:55:66" sized content.</p>
STAR-2828	<p>Master ID and Step are still reported after ptp is disable at the switch interface</p> <p>If you disable ptp on the switch interface, the Master ID and Step is still displayed until the card is rebooted.</p>
STAR-3611	<p>IPG 3901 v2.3.1 displayed old PTP mac address after PTP source changed.</p> <p>IPG3901 still display the old PTP mac address even when the PTP source has changed, the PTP presence status also not consistence while the PTP lock status are fine.</p> <p>Hard reseal the card, change to new mac address. It looks like a refresh issue of the Panel.</p>

<p>STAR-3621</p>	<p>Updating IPG-3901 to the latest version 232 build 20 does not update U-Boot</p> <p>Updating IPG-3901 to the latest version 232 build 20 does not update U-Boot, in the attachment two cards were updated as you can see the older U-boot ver did not change.</p> <p>Version 232 build 21 corrects this.</p>
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KNOWN BUGS & LIMITATIONS

Ref #	Description
<p>Limitations</p>	<p>Active TICO Model</p> <p>“Active TICO Model” is not manages by: Factory default, User presets, Profiles and Restore point.</p> <p>If you want to use restore point feature to configure a new card, you may have to change manually the Actove TICO model manually and re-enable your gateways manually</p>
<p>STAR-3476</p>	<p>TICO 1 – MON & TICO 2 – MON not operational</p> <ul style="list-style-type: none"> 7. TICO 1 – MON Gateway needs Video sender of TICO 1 – ENC to be enabled to be operational 8. TICO 2 – MON Gateway needs Video sender of TICO 2 – ENC to be enabled to be operational <p><u>Workaround:</u> To only Stream TICO – MON, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3397</p>	<p>TICO 1 – ENC & TICO 1 – ENC Statuses</p> <ul style="list-style-type: none"> 7. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant 8. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant <p><u>Workaround:</u> To monitor TICO inputs without Streaming, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>

STAR-3410	<p>Video and audio need to come from same ETH port in aggregation</p> <p>In group sync mode (TR04), SMPTE 2022-6 and AES-67 need to be received on the same ETH interface</p>
STAR-1761 STAR-3487	<p>Test Pattern will disrupt TICO encoders and decoders</p> <p>When using TICO, clicking "Force ALL" check box on the test pattern panel will put the TICO encoders and decoders on errors. Also enabling test pattern for SDI inputs and outputs used for the TICO before enabling TICO encoder or decoder will put the TICO encoder or decoders on errors</p> <p>Workaround: When using the TICO option, do no hit the "Force ALL" check box on the test pattern panel. Also disable test pattern checkbox from corresponding gateways before enabling TICO encoder or Decoder</p>
<p>Requirement</p>	<p>Alignment in Group sync needs SMPTE 2022-6 RTP timestamp to follow PTP</p> <p>Group Sync mode only works if SMPTE 2022-6 RTP timestamps are synced and phased to PTP.</p>
STAR-3243	<p>IP transmitter stops working after a Restore point</p> <p>After a restore point, transmitters stop working and stream statuses don't flag the problem.</p> <p>Workaround: Disable and enable the transmitter to fix the problem.</p>
STAR-2668	<p>Asynchronous SMPTE 2022-6 not supported by the IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 needs to be synchronous to the selected reference. Possible reference signals are an external reference (NTSC or PAL black burst) or the URS signal.</p>
STAR-2898 STAR-2910	<p>IP-to-SDI DA mode limitations</p> <ul style="list-style-type: none"> 7. DA mode doesn't work with bursty sources 8. DA mode is limited to 5 SDI outputs
STAR-2875	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked. When there is no valid PTP, the values reported should be N/A.</p>

STAR-2572	<p>Output on error Slate might not be phased to reference</p> <p>Slate is phased to the reference only when SMPTE 2022-6 receiver is enabled</p>
STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP stream (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
STAR-2712	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
STAR-2732	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 only works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream.</p>
STAR-2664 STAR-3222	<p>Test Pattern Limitations</p> <ul style="list-style-type: none"> 7. SDI Output timing control is ignored when test pattern is enabled. 8. Enabling Test Pattern will generate SDI output errors.
STAR-2555	<p>Test Tone limitations</p> <ul style="list-style-type: none"> 7. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream. 8. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.

<p>STAR-2703</p>	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problem occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p><u>Workaround:</u></p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
<p>STAR-2607</p>	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the "Str. Address", "Str. Port" or "iGMPv3 Source" settings of the received stream from ETH1 will affect the SDI output.</p> <p><u>Workaround:</u> Change settings of ETH1 stream offline.</p>
<p>STAR-2672</p>	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 don't have the same Sequence number. So to be compliant with SMPTE ST 2022-7, both sender and receivers must be of version 2.0.0 or later.</p>
<p>STAR-2396</p>	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled.</p> <p><u>Workaround:</u> Lock the IPG-3901 on the external reference or URS.</p>
<p>STAR-1950</p>	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable.</p> <p><u>Workaround:</u> use a reference, black burst or URS.</p>

<p>STAR-1749</p>	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default.</p> <p><u>Workaround:</u> Apply the factory default to the "Card parameters" first followed by "Network settings"</p>
<p>STAR-1703</p>	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
<p>STAR-1754</p>	<p>DUM Upgrade (Through media port ETH1) works only from 1.2.0 to a newer version</p> <p>Using Densité Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older versions including 1.2.0 after this upgrade.</p> <p><u>Workaround:</u> Users looking to downgrade to a version older than 1.2 can still manually update the SD card to the required version. To upgrade the SD card, refer to the manual.</p>
<p>STAR-1755</p>	<p>Firmware upgrade needs a network path between the upgrading computer and the ETH1 port of the upgraded card</p> <p>For cards that are NOT in an "advanced frame" (see definition below), a firmware upgrade with the Densité Upgrade Manager (DUM) can only be done through the ETH1 media port.</p> <p>So a network path is required between the computer doing the upgrade and the ETH1 port of the card being upgraded. Refer to Annex 1 of the manual. The term "advanced frame" means either:</p> <ul style="list-style-type: none"> 7. GV Node 8. "Densité 3+ FR4" <u>WITH</u> a "DENSITE 3+ FR4 ADV" frame controller
<p>DSERV-2031</p>	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p><u>Workaround:</u> Users should update the IPG-3901 to version 1.3.2 or higher and also ensure that the latest XIO-4901 service is installed.</p>

UPGRADE PACKAGE: 2.3.1

Firmware version: [2.3.1.13](#)

Release date: [2018-03-02](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Official Release](#)

ENHANCEMENTS & NEW FEATURES

Ref#	Description
STAR-3015	<p>AES-67 support for TICO Gateways</p> <p>Support one AES67 sender or receiver per TICO gateway.</p>
STAR-3016	<p>SDI Output alignment for TICO Gateways</p> <p>Frame buffer support fo TICO 1 - DEC and TICO 2 - DEC Gateways. All SDI outputs are automatically aligned to the selected reference (External or URS) .</p>
STAR-3017	<p>SMPTE 2022-7 redundancy for TICO Gateways</p> <p>Support SMPTE 2022-7 redundancy for TICO 1 - DEC and TICO 2 - DEC</p>
STAR-3431	<p>Asynchronous Input for TICO</p> <p>The user can identify 4K SDI inputs as asynchronous using a checkbox. SMPTE 2022-6 TX streams will be flagged as asynchronous based on this setting. This is important for proper operation of Async ST 2022-6 sources received by GV Node v1.3.x.</p>
STAR-1584	<p>Alarms for TICO Gateways</p> <p>Support Alarms for TICO Gateways as per Normal Gateways</p>

STAR-2787 STAR-3290	<p>Sender & Receiver Stream address set to 0.0.0.0</p> <ol style="list-style-type: none"> 1. Stream Address 0.0.0.0 is used to <u>stop streaming</u> and <u>stop receiving</u>, hence it doesn't trigger an error or an alarm 2. Setting a receiver to 0.0.0.0 will select SMPTE 2022-6 embedded audio on the SDI output instead of silence
STAR-3422	<p>Receiver Stream address set to 0.0.0.1</p> <ol style="list-style-type: none"> 1. Stream Address 0.0.0.1 is used to <u>stop receiving</u>, hence it doesn't trigger an error or an alarm 2. Setting a receiver to 0.0.0.1 will select SMPTE 2022-6 embedded audio on the SDI output instead of silence
STAR-3257	<p>Maximum possible active gateways</p> <p>Maximum SDI-to-IP and IP-to-SDI gateways is reported based on the selected application :</p> <ol style="list-style-type: none"> 1. TICO 1 - ENC & TICO 2 - DEC 2. TICO 1 - ENC & TICO 2 - ENC 3. TICO 1 - DEC & TICO 2 - DEC 4. No TICO
DSERV-2341	<p>Quality of Service (QoS)</p> <p>Possibility to change Differentiated Service Code Point (DSCP) for each media type using iControl Panel control: SMPTE 2022-6 or AES-67</p>
STAR-3342	<p>Date/Time on Snapshot Logs</p> <p>Snapshot logs will follow Densite controller (CPU-ETH) Date & Time</p>
STAR-3482	<p>HD SDI output Default Format</p> <p>Possibility to select default video format for SDI outputs set to HD. This format is used when a receiver is enabled and never received a valid SMPTE 2022-6. Otherwise, SDI output format will always follow last valid SMPTE 2022-6</p>

BUGFIXES

Ref#	Description
STAR-3496	<p>TICO – DEC gateways are affected by other gateways</p> <p>TICO 1 - DEC and TICO 2 - DEC SDI outputs are momentarily interrupted when another IP-to-SDI gateway is enabled</p>
STAR-3495	<p>Link Offset status is not stable</p> <p>In Group Sync Mode, Link Offset measurement is not stable.</p>
DSERV-2457	<p>TICO feature is not supported in version 2.2.0</p> <p>TICO feature is not available in version 2.2.x.</p> <p><u>Workaround:</u> TICO feature is available on IPG-3901 v1.3.4</p>
DSERV-2615	<p>I/Os labeling in the iControl service panel does not reflect the actual lexan labeling on the KMX-N-IP-D-3+TRP rear module</p> <p>I/Os labeling in the iControl service panel does not reflect the actual lexan labeling on the KMX-N-IP-D-3+TRP rear module.</p> <p>Service = Rear</p> <p>SDI in1 = MV out 1 SDI in2 = MV out 2 SDI I/O 1 = MV in1 SDI I/O 2 = MV in2 SDI I/O 3 = MV in3 SDI I/O 4 = MV in4 SDI I/O 5 = MV in5 SDI I/O 6 = MV in6 SDI I/O 7 = MV in7 SDI out 1 = MV in8 SDI out 2 = not used</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
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<p>Limitations</p>	<p>Active TICO Model</p> <p>“Active TICO Model” is not managed by: Factory default, User presets, Profiles and Restore point.</p> <p>If you want to use restore point feature to configure a new card, you may have to change manually the Active TICO model manually and re-enable your gateways manually</p>
<p>STAR-3476</p>	<p>TICO 1 – MON & TICO 2 – MON not operational</p> <p>9. TICO 1 – MON Gateway needs Video sender of TICO 1 – ENC to be enabled to be operational</p> <p>10. TICO 2 – MON Gateway needs Video sender of TICO 2 – ENC to be enabled to be operational</p> <p><u>Workaround:</u> To only Stream TICO – MON, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3397</p>	<p>TICO 1 – ENC & TICO 1 – ENC Statuses</p> <p>9. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant</p> <p>10. TICO 1 – ENC Statuses (4K ALIGN, SDI Input and Detected Links) needs Video sender of TICO 1 – ENC to be enabled to be relevant</p> <p><u>Workaround:</u> To monitor TICO inputs without Streaming, you need to enable video sender of TICO – ENC and set Stream address to 0.0.0.0</p>
<p>STAR-3410</p>	<p>Video and audio need to come from same ETH port in aggregation</p> <p>In group sync mode (TR04), SMPTE 2022-6 and AES-67 need to be received on the same ETH interface</p>
<p>STAR-1761 STAR-3487</p>	<p>Test Pattern will disrupt TICO encoders and decoders</p> <p>When using TICO, clicking "Force ALL" check box on the test pattern panel will put the TICO encoders and decoders on errors. Also enabling test pattern for SDI inputs and outputs used for the TICO before enabling TICO encoder or decoder will put the TICO encoder or decoders on errors</p>

	<p>Workaround: When using the TICO option, do not hit the "Force ALL" checkbox on the test pattern panel. Also disable test pattern checkbox from corresponding gateways before enabling TICO encoder or Decoder</p>
Requirement	<p>Alignment in Group sync needs SMPTE 2022-6 RTP timestamp to follow PTP</p> <p>Group Sync mode only works if SMPTE 2022-6 RTP timestamps are synced and phased to PTP.</p>
STAR-3243	<p>IP transmitter stops working after a Restore point</p> <p>After a restore point, transmitters stop working and stream statuses don't flag the problem.</p> <p><u>Workaround:</u> Disable and enable the transmitter to fix the problem.</p>
STAR-2668	<p>Asynchronous SMPTE 2022-6 not supported by the IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 needs to be synchronous to the selected reference. Possible reference signals are an external reference (NTSC or PAL black burst) or the URS signal.</p>
STAR-2898 STAR-2910	<p>IP-to-SDI DA mode limitations</p> <ul style="list-style-type: none"> 9. DA mode doesn't work with bursty sources 10. DA mode is limited to 5 SDI outputs
STAR-2875	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked. When there is no valid PTP, the values reported should be N/A.</p>
STAR-2572	<p>Output on error Slate might not be phased to reference</p> <p>Slate is phased to the reference only when SMPTE 2022-6 receiver is enabled</p>
STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP stream (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>

STAR-2712	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
STAR-2732	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 only works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream.</p>
STAR-2664 STAR-3222	<p>Test Pattern Limitations</p> <p>9. SDI Output timing control is ignored when test pattern is enabled. 10. Enabling Test Pattern will generate SDI output errors.</p>
STAR-2555	<p>Test Tone limitations</p> <p>9. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream. 10. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.</p>
STAR-2703	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problem occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p><u>Workaround:</u></p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
STAR-2607	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the "Str. Address", "Str. Port" or "iGMPv3 Source" settings of the received stream from ETH1 will affect the SDI output.</p>

	<p><u>Workaround:</u> Change settings of ETH1 stream offline.</p>
STAR-2672	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 don't have the same Sequence number. So to be compliant with SMPTE ST 2022-7, both sender and receivers must be of version 2.0.0 or later.</p>
STAR-2396	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled.</p> <p><u>Workaround:</u> Lock the IPG-3901 on the external reference or URS.</p>
STAR-1950	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable.</p> <p><u>Workaround:</u> use a reference, black burst or URS.</p>
STAR-1749	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default.</p> <p><u>Workaround:</u> Apply the factory default to the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade (Through media port ETH1) works only from 1.2.0 to a newer version</p> <p>Using Densité Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older versions including 1.2.0 after this upgrade.</p> <p><u>Workaround:</u> Users looking to downgrade to a version older than 1.2 can still manually update the SD card to the required version. To upgrade the SD card, refer to the manual.</p>

<p>STAR-1755</p>	<p>Firmware upgrade needs a network path between the upgrading computer and the ETH1 port of the upgraded card</p> <p>For cards that are NOT in an "advanced frame" (see definition below), a firmware upgrade with the Densité Upgrade Manager (DUM) can only be done through the ETH1 media port.</p> <p>So a network path is required between the computer doing the upgrade and the ETH1 port of the card being upgraded. Refer to Annex 1 of the manual.</p> <p>The term "advanced frame" means either:</p> <ul style="list-style-type: none"> 9. GV Node 10. "Densité 3+ FR4" <u>WITH</u> a "DENSITE 3+ FR4 ADV" frame controller
<p>DSERV-2031</p>	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p><u>Workaround:</u> Users should update the IPG-3901 to version 1.3.2 or higher and also ensure that the latest XIO-4901 service is installed.</p>

UPGRADE PACKAGE: 2.2.3

Firmware version: [2.2.3 \(CPU 37; FPGA 35\)](#)

Release date: [2017-11-03](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Official Release](#)

ENHANCEMENTS & NEW FEATURES

Ref#	Description
STAR-3030	<p>Asynchronous identification for outgoing SMPTE 2022-6</p> <p>The user can identify SDI inputs as asynchronous using a checkbox. SMPTE 2022-6 TX streams will be flagged as asynchronous based on this setting. This is important for proper operation of Async ST 2022-6 sources received by GV Node v1.3.x.</p>
DSERV-2208	<p>Support new Alarms</p> <p>Adding iControl and GSM alarms for PTP, AES67 and SDI output alignment.</p>
STAR-3073	<p>New AES67 audio profile</p> <p>Adding support for AES67 audio profile 1ms, 8CH, L24, 48KHz.</p>
STAR-3171	<p>Enhance Destination switching</p> <p>Destination switching (IGMP Join/Leave) is now under 1 second.</p>

BUGFIXES

Ref#	Description
STAR-3241	<p>SFP+ presence triggered an alarm after restore point</p> <p>After a restore point, SFP+ presence triggers a false alarm.</p>

STAR-2698	<p>SDI output glitches on recovering a lost SMPTE 2022-6 stream</p> <p>When an SMPTE 2022-6 stream is lost, the SDI output falls to "Slate" without causing a glitch, but the SDI output glitches when the SMPTE 2022-6 stream is recovered.</p>
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KNOWN BUGS & LIMITATIONS

Ref #	Description
Requirement	<p>Alignment in Group sync needs SMPTE 2022-6 RTP timestamp to follow PTP</p> <p>Group Sync mode only works if SMPTE 2022-6 RTP timestamps are synced and phased to PTP.</p>
STAR-3243	<p>IP transmitter stops working after a Restore point</p> <p>After a restore point, transmitters stop working and stream statuses don't flag the problem.</p> <p><u>Workaround:</u> Disable and enable the transmitter to fix the problem.</p>
DSERV-2615	<p>I/Os labeling in the iControl service panel does not reflect the actual lexan labeling on the KMX-N-IP-D-3+TRP rear module</p> <p>I/Os labeling in the iControl service panel does not reflect the actual lexan labeling on the KMX-N-IP-D-3+TRP rear module.</p> <p>Service = Rear</p> <p>SDI in1 = MV out 1 SDI in2 = MV out 2 SDI I/O 1 = MV in1 SDI I/O 2 = MV in2 SDI I/O 3 = MV in3 SDI I/O 4 = MV in4 SDI I/O 5 = MV in5 SDI I/O 6 = MV in6 SDI I/O 7 = MV in7 SDI out 1 = MV in8 SDI out 2 = not used</p>
STAR-2668	<p>Asynchronous SMPTE 2022-6 not supported by the IP-to-SDI Gateways</p>

	Received SMPTE 2022-6 needs to be synchronous to the selected reference. Possible reference signals are an external reference (NTSC or PAL black burst) or the URS signal.
DSERV-2457	<p>TICO feature is not supported in version 2.2.0</p> <p>TICO feature is not available in version 2.2.x.</p> <p><u>Workaround:</u> TICO feature is available on IPG-3901 v1.3.4</p>
STAR-2898 STAR-2910	<p>IP-to-SDI DA mode limitations</p> <p>11. DA mode doesn't work with bursty sources</p> <p>12. DA mode is limited to 5 SDI outputs</p>
STAR-2875	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked. When there is no valid PTP, the values reported should be N/A.</p>
STAR-2572	<p>Output on error Slate might not be phased to reference</p> <p>Slate is phased to the reference only when we previously lose a SMPTE 2022-6 stream.</p>
STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP stream (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
STAR-2712	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
STAR-2732	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 only works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream.</p>
	Test Pattern Limitations

STAR-2664 STAR-3222	<p>11. SDI Output timing control is ignored when test pattern is enabled.</p> <p>12. Enabling Test Pattern will generate SDI output errors.</p>
STAR-2555	<p>Test Tone limitations</p> <p>11. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream.</p> <p>12. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.</p>
STAR-2703	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problem occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
STAR-2607	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the "Str. Address", "Str. Port" or "iGMPv3 Source" settings of the received stream from ETH1 will affect the SDI output.</p> <p>Workaround: Change settings of ETH1 stream offline.</p>
STAR-2672	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 don't have the same Sequence number. So to be compliant with SMPTE ST 2022-7, both sender and receivers must be of version 2.0.0 or later.</p>
STAR-2396	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p>

	<p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled.</p> <p><u>Workaround</u>: Lock the IPG-3901 on the external reference or URS.</p>
STAR-1950	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable.</p> <p><u>Workaround</u>: use a reference, black burst or URS.</p>
STAR-1749	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default.</p> <p><u>Workaround</u>: Apply the factory default to the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade (Through media port ETH1) works only from 1.2.0 to a newer version</p> <p>Using Densité Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older versions including 1.2.0 after this upgrade.</p> <p><u>Workaround</u>: Users looking to downgrade to a version older than 1.2 can still manually update the SD card to the required version. To upgrade the SD card, refer to the manual.</p>
STAR-1755	<p>Firmware upgrade needs a network path between the upgrading computer and the ETH1 port of the upgraded card</p> <p>For cards that are NOT in an "advanced frame" (see definition below), a firmware upgrade with the Densité Upgrade Manager (DUM) can only be done through the ETH1 media port.</p> <p>So a network path is required between the computer doing the upgrade and the ETH1 port of the card being upgraded. Refer to Annex 1 of the manual. The term "advanced frame" means either:</p> <ol style="list-style-type: none"> 11. GV Node

	12. "Densité 3+ FR4" <u>WITH</u> a "DENSITE 3+ FR4 ADV " frame controller
DSERV-2031	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p><u>Workaround:</u> Users should update the IPG-3901 to version 1.3.2 or higher and also ensure that the latest XIO-4901 service is installed.</p>

UPGRADE PACKAGE: 2.2.1

Firmware version: [2.2.1 \(CPU 11; FPGA 19\)](#)

Release date: [2017-06-22](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Official Release](#)

BUGFIXES

Ref#	Description
STAR-2925	<p>ETH2 "Enable" parameter not handled by "Factory default" and "Card Preset"</p> <p>The ETH2 "Enable" is not updated after a "Factory default" (Network Settings) and not managed by "User Preset"</p>
STAR-2909	<p>Redundancy status is RED on +1 Frame</p> <p>As soon as the "+1 frame" checkbox is selected, the redundancy status goes RED although the redundancy is valid.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-2668	<p>Asynchronous SMPTE 2022-6 not supported by the IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 need to be synchronous to the selected reference. Possible reference signals are an external reference (NTSC or PAL black burst) or the URS signal.</p>
DSERV-2457	<p>TICO feature is not supported in version 2.2.0</p> <p>TICO feature is not available in version 2.2.x.</p> <p><u>Workaround:</u> TICO feature is available on IPG-3901 v1.3.4</p>

<p>STAR-2898 STAR-2910</p>	<p>IP-to-SDI DA mode limitations</p> <p>13. DA mode doesn't work with bursty sources 14. DA mode is limited to 5 SDI outputs</p>
<p>STAR-2875</p>	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked. When there is no valid PTP, the values reported should be N/A.</p>
<p>STAR-2572</p>	<p>Output on error Slate might not be phased to reference</p> <p>Slate is phased to the reference only when we previously lose a SMPTE 2022-6 stream.</p>
<p>STAR-2733</p>	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP stream (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
<p>STAR-2712</p>	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
<p>STAR-2732</p>	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 only works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream.</p>
<p>STAR-2698</p>	<p>SDI output glitches on recovering a lost SMPTE 2022-6 stream</p> <p>When losing a SMPTE 2022-6 stream, the SDI output falls to "Slate" without causing a glitch, but the SDI output glitches when the SMPTE 2022-6 stream is recovered.</p>
<p>STAR-2664</p>	<p>Test Pattern Limitations</p> <p>SDI Output timing control is ignored when test pattern is enabled.</p>

STAR-2555	<p>Test Tone limitations</p> <p>13. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream.</p> <p>14. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.</p>
STAR-2703	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problem occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
STAR-2607	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the "Str. Address", "Str. Port" or "iGMPv3 Source" settings of the received stream from ETH1 will affect the SDI output</p> <p>Workaround: Change settings of ETH1 stream offline</p>
STAR-2672	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 don't have the same Sequence number. So to be compliant with SMPTE ST 2022-7, both sender and receivers must be of version 2.0.0 or later.</p>
STAR-2396	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled</p> <p>Workaround : Lock the IPG-3901 on the external reference or URS</p>
STAR-1950	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p>

	<p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable. Workaround : use a reference, black burst or URS</p>
STAR-1749	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default. Workaround : Apply the factory on the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade (Through media port ETH1) works only from 1.2.0 to a newer version</p> <p>Using Densite Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older version including 1.2.0 after this upgrade.</p> <p>Workaround : Users looking to downgrade to version lesser than 1.2 can still use manually update the SD card to the required versions. To upgrade the SD card, refer to the manual.</p>
STAR-1755	<p>Firmware upgrade needs a network path between the upgrading computer and the ETH1 port of the upgraded card</p> <p>For cards that are NOT in an "advanced frame" (see definition below), a firmware upgrade with the Densite Upgrade Manager (DUM) can only be done through the ETH1 media port.</p> <p>So a network path is required between the computer doing the upgrade and the ETH1 port of the card being upgraded. Refer to Annex 1 of manual.</p> <p>The term "advanced frame" means either:</p> <ol style="list-style-type: none"> 13. GV Node 14. "Densité 3+ FR4" <u>WITH</u> a "DENSITE 3+ FR4 ADV" frame controller
DSERV-2031	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p>Workaround : Users should update the IPG-3901 to version 1.3.2 or higher and also ensure that the latest XIO-4901 service is installed.</p>

UPGRADE PACKAGE: 2.2.0

Firmware version: [2.2.0 \(CPU 2; FPGA 19\)](#)

Release date: [2017-06-09](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [BETA](#). See "[LIMITATIONS](#)" below.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
STAR-2062	<p>PTP Redundancy</p> <p>Support multicast PTP on ETH1 and ETH2. If PTP is lost on ETH1, PTP of ETH2 will be used until PTP returns on ETH1.</p> <p>The process can be seamless if the failback is done in less than 2 seconds. To achieve that, the card settings have to respect this rule :</p> <p style="text-align: center;">Announce Interval × Announce Receipt Timeout Count ≤ 2 seconds</p> <p>EX : Announce Interval = 0.500 sec and Announce Receipt Timeout Count = 4</p>
STAR-2471	<p>+ 1 Frame</p> <p>Possibility for additional buffering (1 video frame) to manage "bursty" IP streams (IP-to-SDI)</p> <p><u>Limitation</u> : Changing this setting causes a glitch on the SDI output</p>
STAR-1962	<p>Multicast loopback</p> <p>Support of Multicast loopback with SDI output alignment</p>
STAR-64	<p>SFP Statuses</p> <p>Report SFP statuses like vendor, Part number and more</p>

STAR-2675	<p>Firmware upgrade through CPU-ETH3-ADV</p> <p>Starting from 2.2.0 release, the user can only upgrade the firmware using iControl Densite Upgrade Manager (DUM) using a CPU-ETH3-ADV in FR4 frame or using a GV-Node frame. Connection to the media port is not required anymore</p> <p>Please note that it is possible to upgrade from 2.2.0 to a newer version</p>
STAR-959 STAR-2723 DSERV-2453	<p>New Alarms</p> <ol style="list-style-type: none"> 1. Card Reference 2. PTP 3. ETH1 & ETH2 interface settings
STAR-1560	<p>Quality of Service (QoS) – Diffserv support (Limited functionality)</p> <p>Possibility to change the QoS of SMPTE 2022-6 and AES67 streaming</p> <p><u>Limitation</u> : The control is only possible through the local menu of the card</p>
STAR-2727	<p>Payload type (Limited functionality)</p> <p>Possibility to change the payload type of SMPTE 2022-6 and AES67 streaming</p> <p><u>Limitation</u> : The control is only possible through the local menu of the card</p>

BUGFIXES

Ref #	Description
ICONTROL-20048	*** IPG-3901 incompatibility problem with GV Node ****
STAR-2665	<p>Aggregation mode not support in version 2.0.0 & 2.1.0</p> <p>Aggregation feature will be fully supported in future release</p> <p><u>Workaround:</u> Aggregation is available on IPG-3901 v1.3.4</p>
STAR-2734	<p>Redundancy doesn't work with AES67 profile 125 μsec, 2 ch, L24</p> <p>Redundancy feature doesn't work with AES67 profile "125 μsec, 2 ch, L24".</p> <p><u>Workaround:</u> Use "125 μsec, 8ch, L24" and use silence for channels 3 to 8.</p>
STAR-2708	<p>Syntonize mode limitation</p> <p>AES67 "Syntonize" mode stays ON when operating in TR04 mode ("Alignment Mode" set to "Group Sync (TR04)").</p> <p><u>Workaround:</u> Disable "Syntonize" mode on TR04 mode.</p>
STAR-2692	<p>Audio Group 1 to 4 always embedded when receiving AES67</p> <p>4 audio groups are embedded on the SDI output regardless to the received AES67 profile. Audio silence is embedded on the nonexistent audio channels.</p> <p>EX: for Audio profile "250 usec, 8ch, L24", silence is embedded on audio channels 9 to 16.</p>
STAR-2516 STAR-2548	<p>Test Pattern Limitations</p> <ol style="list-style-type: none"> Overall gateway status turns grey when test pattern is enabled. IP-to-SDI: SDI I/O status report "No Signal"
STAR-2144	TX bandwidth

	Bandwidth on transmission is not managed. Workaround: You should never enable more than 3 3G SMPTE-2022-6 streams
STAR-2643 STAR-2671 STAR-2682	<p>IP-to-SDI DA mode limitations</p> <ol style="list-style-type: none"> 1. All IP-to-SDI gateways with the same SMPTE 2022-6 source address (same Str. Address, Str. Port and iGMPv3) need to have the same Timing output 2. DA mode only works when both primary (ETH1) and secondary (ETH2) streams of the gateway are the same than an active gateway 3. SDI output may glitch when setting the DA mode in redundancy mode
STAR-2696 STAR-2695	<p>SDI I/O Statuses</p> <ol style="list-style-type: none"> 1. IP-to-SDI SDI I/O Status is missing. Workaround: Disable/Enable the SMPTE 2022-6 stream 2. SDI-to-IP SDI I/O Status is missing. Workaround: Disable/Enable the SMPTE 2022-6 stream

KNOWN BUGS & LIMITATIONS

Ref #	Description
LIMITATIONS	*** No Manual is available ****
STAR-2668	<p>Asynchronous SMPTE 2022-6 not supported by IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 need to be synchronous to the selected reference. Possible reference are external reference (NTSC or PAL black burst) or URS</p>
DSERV-2457	<p>TICO feature is not supported in version 2.2.0</p> <p>TICO feature is not available in version 2.2.0</p> <p><u>Workaround:</u> TICO feature is available on IPG-3901 v1.3.4</p>
STAR-2909	Redundancy status is RED on +1 Frame

	The redundancy goes RED the moment the +1 frame is selected. Although the redundancy is valid
STAR-2898 STAR-2910	<p>IP-to-SDI DA mode limitations</p> <p>15. DA mode doesn't work with bursty sources 16. DA mode is limited to 5 SDI outputs</p>
STAR-2875	<p>Link Latency and Link Offset statuses need PTP</p> <p>Link Latency and Link Offset statuses are not valid when PTP is not present or not locked</p>
STAR-2572	<p>Output on error Slate might not be phase to reference</p> <p>Slate is phased to the reference only when we previously lose a SMPTE 2022-6 stream</p>
STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP streams (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
STAR-2712	<p>Output Timing slider range limitation</p> <p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
STAR-2732	<p>Audio application limitations on IP-to-SDI</p> <p>Receiving AES67 works if the SMPTE 2022-6 reception is enabled. Also, the SDI output alignment is only valid on reception of a valid SMPTE 2022-6 stream</p>
STAR-2698	<p>SDI output glitches on recovering a lost SMPTE 2022-6 stream</p> <p>When losing a SMPTE 2022-6 stream, the SDI output falls to "Slate" without causing a glitch, but the SDI output glitches when the SMPTE 2022-6 stream is recovered.</p>
STAR-2664	<p>Test Pattern Limitations</p> <p>SDI Output timing control is ignored when test pattern is enabled</p>

STAR-2555	<p>Test Tone limitations</p> <p>15. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream.</p> <p>16. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.</p>
STAR-2703	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problems occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". <p>CLICK THE "APPLY" BUTTON.</p>
STAR-2607	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the Str. Address, Str. Port or iGMPv3 Source settings of the received stream from ETH1 will affect the SDI output</p> <p>Workaround: Change settings of ETH1 stream offline</p>
STAR-2672	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 doesn't have the same Sequence number</p>
STAR-2396	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced (IPG-3901 1.3.x)</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled</p> <p>Workaround : Lock the IPG-3901 on the external reference or URS</p>
STAR-1950	<p>4K output links take too much time to stabilize without a reference (IPG-3901 1.3.x)</p>

	<p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable. Workaround : use a reference, black burst or URS</p>
STAR-1749	<p>Factory default may not reset all parameters Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default. Workaround : Apply the factory on the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade works only from 1.2.0 to a newer version Using Densite Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older version including 1.2.0 after this upgrade. Workaround : Users looking to downgrade to version lesser than 1.2 can still use manually update the SD card to the required versions. To upgrade the SD card, refer to the manual.</p>
STAR-1755	<p>Firmware upgrade through iControl Densite Upgrade Manager (DUM) need iControl Solo and an FTP connection to IPG-3901 ETH1 The firmware upgrade using DUM requires FTP connection through IPG-3901 ETH1 and an iControl Solo. Users should have this iControl solo installed on a machine that is connected to the media switch. The upgrade will go through the switch from iControl solo to the IPG-3901 ETH1. Refer to Annex 1 at manual.</p>
DSERV-2031	<p>IPG-3901 incompatibility problem with XIO-4901 Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel. Workaround : Users should update the IPG-3901 to version 1.3.2 or higher & also should ensure that the latest XIO-4901 service is installed in the iControl platform to get IPG-3901 to work simultaneously with XIO-4901.</p>

UPGRADE PACKAGE: 2.1.0

Firmware version: [2.1.0 \(CPU 4; FPGA 18\)](#)

Release date: [2017-03-31](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Limited functionality.](#) See **"LIMITATIONS"** below.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
STAR-2054	<p>PTP</p> <p>Support multicast PTP for AES67 senders and receivers.</p> <p>NOTE: This feature requires a valid external Reference (Black Burst or URS)</p>
STAR-2028	<p>AES67 senders and receivers</p> <p>Support one AES67 sender or receiver per gateway. The supported AES67 profiles are : "1 msec 1ch 24L" ; "1 msec 2ch 24L" ; "250µsec 2ch 24L", "125 µsec 2ch L24", "125 µsec 8ch L24" and "125 µsec 16ch L24"</p> <p>NOTE: This feature requires PTP except if you are in "Syntonize" mode</p>
STAR-2018	<p>AES67 Link Latency statuses</p> <p>Report "Link Latency" for each AES67 received streams</p> <p>NOTE: This feature requires PTP</p>

<p>STAR-2358</p>	<p>TR04 mode</p> <p>AES67 follows automatically SMPTE 2022-6 alignment to the Reference.</p> <p>NOTE:</p> <ol style="list-style-type: none"> 1. This feature requires PTP 2. "Link Offset" Status has to respect this condition : <p>"Link Offset" Status > "Link Latency" Statuses + 10 x AES67 Packet Time</p> <p>EX: If AES67 Profile is "125 μsec 8ch L24" and "Link Latency" Status is 200 μsec, "Link Offset" Status has to be higher than 200 μsec + 10 x 125 μsec.</p> <p>To increase the "Link Offset" Status, increase the "Output timing" Slider.</p> <p>In redundancy mode take the highest "Link Latency" value between ETH1 and ETH2.</p>
<p>STAR-2473</p>	<p>Link Offset Status</p> <p>In TR04 mode, report the current "Link Offset" of the received SMPTE-20226 streams resulting from the SDI output timing adjustments.</p> <p>NOTE:</p> <p>This feature requires PTP</p>
<p>STAR-2017</p>	<p>Separate mode & Link Offset Slider</p> <p>In "Separate" mode, the AES67 alignment follows the "Link Offset" Slider.</p> <p>NOTE :</p> <ol style="list-style-type: none"> 1. This feature requires PTP 2. "Link Offset" Slider has to respect this condition : <p>"Link Offset" Slider > "Link Latency" Statuses + 10 x AES67 Packet Time</p> <p>EX : If AES67 Profile is "125 μsec 8ch L24" and "Link Latency" Status is 200 μsec, "Link Offset" Slider has to be set to at least 200 μsec + 10 x 125 μsec.</p> <p>In redundancy mode take the highest "Link Latency" value between ETH1 and ETH2.</p>

STAR-2196	<p>AES67 Syntonize mode</p> <p>In "Separate" mode, this option allows reception of AES67 without PTP.</p> <p>NOTE: In "Syntonize" mode, the "Link Offset" slider has no effect on the AES67 alignment</p>
STAR-2044	<p>AES67 Redundancy</p> <p>IP-to-SDI gateways (AES67 receivers): In redundancy mode, AES67 receivers are compliant with the Seamless Protection Switching of SMPTE ST 2022 IP Datagrams Class A as specified per SMPTE 2022-7.</p> <p>SDI-to-IP gateways (AES67 senders): In redundancy mode, two identical AES67 streams are generated. The first one on ETH1 port and the second one ETH2.</p>
STAR-2362	<p>Output Timing Status</p> <p>The "Output Timing" Slider is translated in lines and μsec.</p>
STAR-887	<p>Audio Test Tone</p> <p>The test tone is a 18dBFS@1kHz (left Pulsed 250 ms each 3 seconds).</p> <p>SDI-to-IP gateways (AES67 senders): Test Tone is sent on AES67 streams</p> <p>IP-to-SDI gateways (AES67 receivers) : Test Tone is embedded on the SDI output when AES67 stream is enabled</p>
STAR-1975	<p>SDI output always active when receiving SMPTE 2022-6 and/or AES67</p> <p>"Kill" selection no longer supported for the SDI output on error</p>

BUGFIXES

Ref#	Description
STAR-2549	<p>SMPTE 2022-6 receivers work in multicast only</p> <p>Only multicast streams can be received. Card is unable to lock on unicast streams</p>

STAR-2541	<p>IP-to-SDI Test Pattern Limitations</p> <p>Test-pattern takes up to 10 seconds to get stable.</p>
STAR-2644	<p>IP-to-SDI DA mode limitations</p> <p>IP-to-SDI gateways set with the same SMPTE 2022-6 source address (same Str. Address, Str. Port and iGMPv3) have to be Disabled/Enabled (En.)</p>
DSERV-2161	<p>Gateways missing on KMX-3901-IN-IP-D-3+TRP</p> <p>WITH THE KMX-3901-IN-IP-D-3+TRP REAR, GATEWAY MV IN 7 AND MV IN 8 ARE MISSING</p>
STAR-2718	<p>On boot, there is a risk that one or more of the ETH ports do not start up</p> <p>Customer has 160-190 IPG-3901 cards. On each startup of their truck, they find between that 4 to 6 IPG cards have failed to start the network connectivity. By reseating the IPG card, they find the network interface starts up.</p>

KNOWN BUGS & LIMITATIONS

Ref#	Description
LIMITATIONS	<p>*** Only 1920x1080@59i & 1920x1080@50i format were fully tested ***</p> <p>*** No Manual is available ****</p> <p>*** Card Profiles not supported ****</p>
COMING SOON	<p>Coming features :</p> <ol style="list-style-type: none"> AES67 Link Latency "In Range" Status: Inform the user when AES67 Link Latency can't be managed by the actual configuration. The user will have to increase the "Output Timing" slider in "TR04" mode, or increase the "Link offset" slider in "Separate" mode Redundancy Skew problems: The redundancy status will turn RED if the incoming skew between ETH1 and ETH2 stream can't be managed by the actual configuration. In this case, the user will have to increase the "Output Timing" slider for SMPTE 2022-6. For AES67 the user will

	<p>have to increase the "Output Timing" slider in "TR04" mode, or increase the "Link offset" slider in "separate" mode</p> <p>3. "+1 Frame": Possibility to add one additional frame to the SDI output.</p>
ICONTROL-20048	<p>*** IPG-3901 incompatibility problem with GV Node ***</p>
STAR-2513	<p>TICO feature not supported in version 2.0.0 & 2.1.0</p> <p>TICO feature will be fully supported in future release</p> <p><u>Workaround:</u> TICO feature is available on IPG-3901 v1.3.4</p>
STAR-2665	<p>Aggregation mode not support in version 2.0.0 & 2.1.0</p> <p>Aggregation feature will be fully supported in future release</p> <p><u>Workaround:</u> Aggregation is available on IPG-3901 v1.3.4</p>
STAR-2668	<p>Asynchronous SMPTE 2022-6 not supported by IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 need to be synchronous to the selected reference. Possible reference are external reference (NTSC or PAL black burst) or URS</p>
STAR-2733	<p>Changing SDI-to-IP stream address may corrupt video or audio content</p> <p>For an SDI-to-IP gateway, changing the "Str. Address" or "Str. Port" of an IP streams (SMPTE 2022-6 or AES67) may send corrupted video and audio content.</p>
STAR-2734	<p>Redundancy doesn't work with AES67 profile 125 μsec, 2 ch, L24</p> <p>Redundancy feature doesn't work with AES67 profile "125 μsec, 2 ch, L24".</p> <p><u>Workaround:</u> Use "125 μsec, 8ch, L24" and use silence for channels 3 to 8.</p>
STAR-2712	<p>Output Timing slider range limitation</p>

	<p>Range is 0 to 16600 μsec for 59Hz formats and 0 to 19900 μsec for 50Hz formats.</p>
<p>STAR-2723</p>	<p>No Alarms support for PTP</p> <p>No Card LED, iControl Alarm nor GSM alarm are offered for the PTP feature.</p>
<p>STAR-2732 STAR-2695 STAR-2696</p>	<p>Audio application limitations</p> <ol style="list-style-type: none"> 1. After a boot up or a scan rate changes, the SDI output may not work Workaround: After a boot up or a scan rate change, enable the SMPTE 2022-6 of the IP-to-SDI gateway momentarily and disable it 2. SDI-to-IP SDI I/O Status is missing. Workaround: Disable/Enable the SMPTE 2022-6 stream 3. IP-to-SDI SDI I/O Status is missing. Workaround: Disable/Enable the SMPTE 2022-6 stream
<p>STAR-2708</p>	<p>Syntonize mode limitation</p> <p>AES67 "Syntonize" mode stays ON when operating in TR04 mode ("Alignment Mode" set to "Group Sync (TR04)").</p> <p>Workaround: Disable "Syntonize" mode on TR04 mode.</p>
<p>STAR-2698</p>	<p>SDI output glitches on recovering a lost SMPTE 2022-6 stream (with a reference)</p> <p>When losing a SMPTE 2022-6 stream, the SDI output falls to "Slate" without causing a glitch, but the SDI output glitches when the SMPTE 2022-6 stream is recovered.</p>
<p>STAR-2692</p>	<p>Audio Group 1 to 4 always embedded when receiving AES67</p> <p>4 audio groups are embedded on the SDI output regardless to the received AES67 profile. Audio silence is embedded on the nonexistent audio channels. EX: for Audio profile "250 usec, 8ch, L24", silence is embedded on audio channels 9 to 16.</p>
<p>STAR-2664 STAR-2548 STAR-2516</p>	<p>Test Pattern Limitations</p> <ol style="list-style-type: none"> 1. SDI Output timing control is ignored when test pattern is enabled 2. IP-to-SDI: SDI I/O status report "No Signal" 3. Overall gateway status turns grey when test pattern is enabled.

STAR-2555	<p>Test Tone limitations</p> <p>17. SDI-to-IP: On Test Pattern activation, test tone is generated on the AES67 stream, but not on the SMPTE 2022-6 Stream.</p> <p>18. IP-to-SDI: On Test Pattern activation, test tone is embedded on the SDI only if AES67 stream is enabled.</p>
STAR-2144	<p>TX bandwidth</p> <p>Bandwidth on transmission is not managed. Workaround: You should never enable more than 3 3G SMPTE-2022-6 streams</p>
STAR-2703	<p>When changing ONLY the network gateway of an interface, unicast streaming does not work (Layer3)</p> <p>This problems occurs when working in the "Network > Settings" tab of the iControl UI.</p> <p>If <u>ONLY</u> the "Gateway" value is changed, this setting is not applied.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • Change "Gateway" to the desired value. • Also change the "Subnet Mask" or the "IP address". • Click the "Apply" button. • Revert to the original "Subnet Mask" or the "IP address". • Click the "Apply" button.
STAR-2607	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the Str. Address, Str. Port or iGMPv3 Source settings of the received stream from ETH1 will affect the SDI output</p> <p><u>Workaround:</u> Change settings of ETH1 stream offline</p>
STAR-2643 STAR-2671 STAR-2682	<p>IP-to-SDI DA mode limitations</p> <p>4. All IP-to-SDI gateways with the same SMPTE 2022-6 source address (same Str. Address, Str. Port and iGMPv3) need to have the same Timing output</p> <p>5. DA mode only works when both primary (ETH1) and secondary (ETH2) streams of the gateway are the same than an active gateway</p> <p>6. SDI output may glitch when setting the DA mode in redundancy mode</p>

STAR-2672	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 doesn't have the same Sequence number</p>
STAR-2396	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled <u>Workaround</u> : Lock the IPG-3901 on the external reference or URS</p>
STAR-1950	<p>4K output links take too much time to stabilize without a reference</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable. <u>Workaround</u> : use a reference, black burst or URS</p>
STAR-1749	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default. <u>Workaround</u> : Apply the factory on the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade works only from 1.2.0 to a newer version</p> <p>Using Densite Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older version including 1.2.0 after this upgrade.</p> <p><u>Workaround</u> : Users looking to downgrade to version lesser than 1.2 can still use manually update the SD card to the required versions. To upgrade the SD card, refer to the manual.</p>

<p>STAR-1755</p>	<p>Firmware upgrade through iControl Densite Upgrade Manager (DUM) need iControl Solo and an FTP connection to IPG-3901 ETH1</p> <p>The firmware upgrade using DUM requires FTP connection through IPG-3901 ETH1 and an iControl Solo. Users should have this iControl solo installed on a machine that is connected to the media switch. The upgrade will go through the switch from iControl solo to the IPG-3901 ETH1. Refer to Annex 1 at manual.</p>
<p>DSERV-2031</p>	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p>Workaround : Users should update the IPG-3901 to version 1.3.2 or higher & also should ensure that the latest XIO-4901 service is installed in the iControl platform to get IPG-3901 to work simultaneously with XIO-4901.</p>

UPGRADE PACKAGE: 2.0.0

Firmware version: [2.0.0 \(CPU 3; FPGA 43\)](#)

Release date: [2017-02-28](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Limited functionality. See "LIMITATIONS" below.](#)

ENHANCEMENTS & NEW FEATURES

Ref #	Description
STAR-2037	<p>SMPTE ST 2022-7 Class A Support</p> <p>IP-to-SDI: In redundancy mode, SMPTE 2022-6 receivers are compliant with the Seamless Protection Switching of SMPTE ST 2022 IP Datagrams Class A as specified per SMPTE 2022-7.</p> <p>IP-to-SDI: In redundancy mode, two identical SMPTE 2022-6 streams are generated. The first one on ETH1 port and the second one ETH2.</p>
STAR-2469	<p>SMPTE 2022-6 Timing to Reference</p> <p>Report received SMPTE 2022-6 timing to reference for each IP-to-SDI Gateways</p>
STAR-2072	<p>Frame Buffer & SDI outputs Alignment to Reference</p> <p>Frame buffer support for each IP-to-SDI Gateways. All SDI outputs are automatically aligned to the selected External or URS Reference.</p>
STAR-1103	<p>SDI Output Timing Control</p> <p>Output Timing adjustment control up to half a frame for interlaced formats and one frame for progressive formats for each IP-to-SDI Gateways</p>
STAR-2667	<p>Profiles & User Presets will preserve Network configurations</p>

	Loading Profiles and User Presets will not affect ETH1 and ETH2 network configurations. Except for ETH2 "Operation Mode"
STAR-2207	IPG-3901 will support up to 5 Gateways per ETH port Card will support Up to 5 Gateways per ETH port to support upcoming feature like AES67 feature
STAR-2070	External Reference always required for IP-to-SDI Gateways "No Reference" selection no longer supported.

BUGFIXES

Ref#	Description
STAR-2199	Restore point does not update the gateways ARP table When an IPG-3901 uses the controller restore point function, if the network IP on the IPG is different than what is stored in the restored point the ARP table may not be resolved on connected switch.
STAR-2442	Source Specific Multicast not working in iGMPv3 The iGMPv3 Source Specific Multicast is not working

KNOWN BUGS & LIMITATIONS

Ref#	Description
LIMITATIONS	*** Only 1920x1080@59i format is supported ***
ICONTROL-20048	*** IPG-3901 incompatibility problem with GV Node ****
STAR-2513	TICO feature not supported in version 2.0.0 TICO feature will be fully supported in future release

	<p><u>Workaround:</u> TICO feature is available on IPG-3901 v1.3.4</p>
<p>STAR-2665</p>	<p>Aggregation mode not support in version 2.0.0</p> <p>Aggregation feature will be fully supported in future release</p> <p><u>Workaround:</u> Aggregation is available on IPG-3901 v1.3.4</p>
<p>STAR-2668</p>	<p>Asynchronous SMPTE 2022-6 not supported by IP-to-SDI Gateways</p> <p>Received SMPTE 2022-6 need to be synchronous to the selected reference. Possible reference are external reference (NTSC or PAL black burst) or URS</p>
<p>STAR-2607</p>	<p>Changing address settings of ETH1 SMPTE 2022-6 stream disturbs the SDI output</p> <p>IP-to-SDI: changing the Str. Address, Str. Port or iGMPv3 Source settings of the received stream from ETH2 will affect the SDI output</p> <p><u>Workaround:</u> Change settings of ETH1 stream offline</p>
<p>STAR-2541 STAR-2664 STAR-2548</p>	<p>IP-to-SDI Test Pattern Limitations</p> <ol style="list-style-type: none"> 4. Test-pattern takes up to 10 seconds to get stable. 5. SDI Output timing control is ignored when test pattern is enabled 6. SDI I/O status report "No Signal"
<p>STAR-2643 STAR-2644 STAR-2671</p>	<p>IP-to-SDI DA mode limitations</p> <ol style="list-style-type: none"> 1. All IP-to-SDI gateways with the same SMPTE 2022-6 source address (same Str. Address, Str. Port and iGMPv3) need to have the same Timing output 2. IP-to-SDI gateways set with the same SMPTE 2022-6 source address (same Str. Address, Str. Port and iGMPv3) have to be Disabled/Enabled (En.) 3. DA mode only works when both primary (ETH1) and secondary (ETH2) streams of the gateway are the same than an active gateway
<p>STAR-2672</p>	<p>SDI-to-IP gateways have to be upgraded to 2.0.0 to be compliant with SMPTE ST 2022-7</p> <p>On version 1.x.x in redundancy mode, transmitted streams on ETH1&ETH2 doesn't have the same Sequence number</p>

STAR-2549	<p>SMPTE 2022-6 receivers work on multicast only</p> <p>Only multicast streams can be received. Card is unable to lock on unicast streams</p>
STAR-2480	<p>On boot, there is a risk that one or more of the ETH ports do not start up</p> <p>Customer has 160-190 IPG-3901 cards. On each startup of their truck, they find between that 4 to 6 IPG cards have failed to start the network connectivity. By reseating the IPG card, they find the network interface starts up.</p>
STAR-2396	<p>SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced</p> <p>Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled <u>Workaround</u> : Lock the IPG-3901 on the external reference or URS</p>
STAR-1950	<p>4K output links take too much time to stabilize without a reference</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable. <u>Workaround</u> : use a reference, black burst or URS</p>
DSERV-2161	<p>Gateways missing on KMX-3901-IN-IP-D-3+TRP</p> <p>With the KMX-3901-IN-IP-D-3+TRP rear, gateway MV IN 7 and MV IN 8 are missing</p>
STAR-1749	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default. <u>Workaround</u> : Apply the factory on the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade works only from 1.2.0 to a newer version</p> <p>Using Densite Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older version including 1.2.0 after this upgrade. <u>Workaround</u> : Users looking to downgrade to version lesser than 1.2 can still use manually update the SD card to the required versions. To upgrade the SD card, refer to the manual</p>

<p>STAR-1755</p>	<p>Firmware upgrade through iControl Densite Upgrade Manager (DUM) need iControl Solo and an FTP connection to IPG-3901 ETH1</p> <p>The firmware upgrade using DUM requires FTP connection through IPG-3901 ETH1 and an iControl Solo. Users should have this iControl solo installed on a machine that is connected to the media switch. The upgrade will go through the switch from iControl solo to the IPG-3901 ETH1. Refer to Annex 1 at manual.</p>
<p>DSERV-2031</p>	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p> <p><u>Workaround</u> : Users should update the IPG-3901 to version 1.3.2 or higher & also should ensure that the latest XIO-4901 service is installed in the iControl platform to get IPG-3901 to work simultaneously with XIO-4901</p>

UPGRADE PACKAGE: 1.3.4

Firmware version: [1.3.4 \(CPU 33; FPGA ENC&ENC 176; FPGA DEC&DEC 181; FPGA ENC&DEC 175\)](#)

Release date: [2016-10-04](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

BUGFIXES

Ref#	Description
STAR-2094	<p>IPG-3901 stops working properly after a couple of days</p> <p>IPG-3901 stopped working because of memory leaks in the software application</p>

KNOWN BUGS & LIMITATIONS

Ref#	Description
STAR-2097	<p>Rebooting/reconfiguring a network switch fails to cause the IPG to re-issue/respond to ARP</p> <p>Reconfiguring a network router or repowering it will not cause the IPG to update the routers ARP cache. This requires the MAC address of the IPG to be programmed into the switch for fully multicast scenarios. Note that hot swapping an IPG with a replacement will require the MAC address to be manually updated in the switch at the same time.</p>
STAR-1950	<p>4K output links take too much time to stabilize without a reference</p> <p>When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable.</p> <p><u>Workaround</u> : use a reference, black burst or URS</p>
DSERV-2161	<p>Gateways missing on KMX-3901-IN-IP-D-3+TRP</p> <p>With the KMX-3901-IN-IP-D-3+TRP rear, gateway MV IN 7 and MV IN 8 are missing</p>

UPGRADE PACKAGE: 1.3.3

Firmware version: [1.3.3 \(CPU 27; FPGA ENC&ENC 176; FPGA DEC&DEC 181; FPGA ENC&DEC 175\)](#)

Release date: [2016-08-24](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

BUGFIXES

Ref#	Description
STAR-1979	<p>Assigning an IP stream to a gateway (IP-to-SDI) may cause glitches on another gateway</p> <p>The problem happen when the IP stream is already used by another gateway, Trying to assign the same IP stream to another gateway may cause a glitch on the first gateway</p> <p>EX: Gateway SDI OUT 1 <- IP Stream A Gateway SDI OUT 2 <- IP Stream B</p> <p>If we try to assign IP Stream A to SDI OUT 2, SDI OUT 1 may lose momentarily IP Stream A</p>
STAR-2036	<p>Glitches on the 4K outputs</p> <p>Illegal words on the 4K outputs were causing equipment to unlock on the received 4K (TICO Decoder)</p>

UPGRADE PACKAGE: 1.3.2

Firmware version: [1.3.2 \(CPU 23; FPGA ENC&ENC 153; FPGA DEC&DEC 156; FPGA ENC&DEC 154\)](#)

Release date: [2016-07-07](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

ENHANCEMENTS & NEW FEATURES

Ref #	Description
STAR-1241	<p>TICO option</p> <p>New TICO option has been added to IPG-3901. With this option, the users will have the possibility to encode TICO over IP and decode TICO from IP and the card now supports 4K links in 2SI and SDQS.</p>
STAR-332	<p>Firmware upgrade through iControl Densite Upgrade Manager (DUM)</p> <p>Starting from v1.3.2 release, the user can also upgrade the firmware using iControl Densite Upgrade Manager (DUM) in addition to the SD card upgrade through the IPG card. Please note that it is possible to upgrade from v 1.2.0 to a newer version but downgrade to v1.2.0 is not allowed from v1.3.2 and above.</p>
STAR-918	<p>Test Pattern 1080p</p> <p>Support for Test Pattern 1080p format is now available on the card</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-1690	<p>TICO encoder 4K links status do not follow the scan rate settings</p> <p>4K links status will not trigger a problem if the incoming 4K is not on the same frame rate than the Scan rate setting For example, 4K links status will not trigger an error if the incoming 4K is 59Hz and the scan rate on the "Reference" panel is set to 50Hz. Any other invalid scenarios to the input signal status will be reported at the TICO "config." page.</p>

STAR-1651	<p>No TICO Test pattern is offered for TICO gateways</p> <p>Test pattern feature is not available for TICO gateways and is available for normal gateways in all supported format.</p>
STAR-1761	<p>Test Pattern will disrupt TICO encoders and decoders</p> <p>When using TICO, clicking "Force ALL" check box on the test pattern panel will put the TICO encoders and decoders on errors. Also enabling test pattern for SDI inputs and outputs used for the TICO before enabling TICO encoder or decoder will put the TICO encoder or decoders on errors</p> <p>Workaround: When using the TICO option, do not hit the "Force ALL" check box on the test pattern panel. Also disable test pattern checkbox from corresponding gateways before enabling TICO encoder or Decoder</p>
STAR-1749	<p>Factory default may not reset all parameters</p> <p>Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default.</p> <p>Workaround : Apply the factory on the "Card parameters" first followed by "Network settings"</p>
STAR-1703	<p>Loading a profile may take 5 seconds</p> <p>When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.</p>
STAR-1754	<p>DUM Upgrade works only from 1.2.0 to a newer version</p> <p>Using Densite Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older version including 1.2.0 after this upgrade.</p> <p>Workaround : Users looking to downgrade to version lesser than 1.2 can still use manually update the SD card to the required versions. To upgrade the SD card, refer to the manual</p>
STAR-1755	<p>Firmware upgrade through iControl Densite Upgrade Manager (DUM) need iControl Solo and an FTP connection to IPG-3901 ETH1</p> <p>The firmware upgrade using DUM requires FTP connection through IPG-3901 ETH1 and an iControl Solo. Users should have this iControl solo installed on a machine that is connected to the media switch. The upgrade will go through the switch from iControl solo to the IPG-3901 ETH1. Refer to Annex 1 at manual.</p>
DSERV-2031	<p>IPG-3901 incompatibility problem with XIO-4901</p> <p>Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel.</p>

	<p><u>Workaround</u> : Users should update the IPG-3901 to version 1.3.2 or higher & also should ensure that the latest XIO-4901 service is installed in the iControl platform to get IPG-3901 to work simultaneously with XIO-4901</p>
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UPGRADE PACKAGE: 1.2.0

Firmware version: [1.2.0 \(CPU 16, FPGA 33\)](#)

Release date: [2016-04-29](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

ENHANCEMENTS & NEW FEATURES

Ref #	Description
STAR-1222	<p>Added Ethernet port bandwidth aggregation</p> <p>It is now possible to use the secondary Ethernet port for extending the amount of bandwidth available to 20 GigE</p>
STAR-1393	<p>Default IP port for gateways is 1000 which can conflict with reserved port assignment</p> <p>IANA reserved port assignments go up to 1023, so a default gateway port of 1000 can cause a conflict. This has been resolved by setting the default gateway IP port to 10,000.</p>

BUGFIXES

Ref#	Description
STAR-1307	<p>MAC addresses generated for multicast streams may be incorrect</p> <p>In previous versions the generated MAC address for a given multicast IP stream may have been incorrect. A fix was made to ensure the correct MAC addresses are generated.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-1391	<p>Card alarms and iControl alarms are not disabled one ETH2 Operation mode : OFF or Aggregation</p>

	Based on the chosen Operation mode (OFF & Aggregation) the ETH2 alarm or/and Backup alarms are not disabled
STAR-959	<p>We are missing Card alarms and iControl/GSM alarms for the reference</p> <p>The support of the card alarm and the iControl/GSM alarm is not supported for the support of the reference</p>
STAR-918	<p>Test pattern in 3G is not available</p> <p>The test pattern is only available in SD and HD (720p and 1080i).</p>
STAR-907	<p>Potential bandwidth problem</p> <p>When an IGMP v3 Source is specified for multicast and the IPG-3901 is using about 90% of its IP bandwidth (e.g. 6 x HD or 3 x 3G), changing the input IP address/port settings on any of the active gateways might cause an overloading of the switch. This results in a brief (approximately 5 seconds) interruption of all multicast traffic on the switch.</p> <p>Workaround: To avoid the loss of all inputs, we recommend that you disable the gateway while its IP address or port is being changed.</p>
STAR-888	<p>Densité Upgrade Manager not supported</p> <p>Upgrading the card through the Densité Upgrade Manager (DUM) is not supported. To upgrade the card, follow the instructions provided with the upgrade package.</p>
STAR-803	<p>SDI jitter may be outside specifications</p> <p>In some situations, the SDI output jitter may be outside of the timing jitter specifications (10Hz). This may occur when the input streams have too much IP packet jitter or the Output on Error Mode is set to configurable color and activated. This issue can be resolved by ensuring the SDI output is locked to a reference.</p>
STAR-720	<p>Output on Error over Test Pattern</p> <p>The Output on Error will be activated when the test pattern is enabled for a gateway and the global test pattern format doesn't match the format specified for that gateway.</p>

UPGRADE PACKAGE: 1.1.0

Firmware version: [1.1.0 \(CPU 20, FPGA 33\)](#)

Release date: [2016-02-26](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

ENHANCEMENTS & NEW FEATURES

Ref #	Description
STAR-1288	<p>System-wide Scan Rate moved to Reference tab</p> <p>The System-wide Scan Rate panel, which used to be on the Gateway Config tab, is now displayed on the Reference tab. This new location is consistent with other card configuration options and allows easier problem diagnosis of external reference and URS issues.</p>
STAR-983	<p>Support for the IPG-3901-3+DRP rear connector panel</p> <p>Support was added for the IPG-3901-3+DRP, which is the new rear connector panel used to install the IPG-3901 card in the new Densité 3+ FR1 and Densité 3+ FR4 frames</p>
STAR-950	<p>SDI output locked to reference</p> <p>Support was added to the IPG-3901 to allow genlocking of SDI outputs. The IPG-3901 can now lock its outputs to an external reference and/or URS. This functionality is configured using the new Reference tab in iControl.</p> <p>When the SDI outputs are locked to a reference, output jitter is significantly reduced and conforms to or exceeds the SDI output timing jitter specification.</p> <p>Please note that although SDI outputs can be locked to a common reference, the SDI outputs cannot yet be phase aligned. This will be addressed in a future release.</p>

BUGFIXES

Ref#	Description
STAR-1194	<p>IPG-3901 cards may lose their MAC address upon reboot</p> <p>An issue was identified whereby IPG-3901 cards could lose their network MAC addresses if they lost power or were removed from their frame during a reboot. This was corrected so that the cards are more resilient to power loss during reboot and the MAC addresses are no longer lost.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-959	<p>We are missing Card alarms and iControl/GSM alarms for the reference</p> <p>The support of the card alarm and the iControl/GSM alarm is not supported for the support of the reference</p>
STAR-918	<p>Test pattern in 3G is not available</p> <p>The test pattern is only available in SD and HD (720p and 1080i).</p>
STAR-907	<p>Potential bandwidth problem</p> <p>When an IGMP v3 Source is specified for multicast and the IPG-3901 is using about 90% of its IP bandwidth (e.g. 6 x HD or 3 x 3G), changing the input IP address/port settings on any of the active gateways might cause an overloading of the switch. This results in a brief (approximately 5 seconds) interruption of all multicast traffic on the switch.</p> <p><u>Workaround:</u> To avoid the loss of all inputs, we recommend that you disable the gateway while its IP address or port is being changed.</p>
STAR-888	<p>Densité Upgrade Manager not supported</p> <p>Upgrading the card through the Densité Upgrade Manager (DUM) is not supported. To upgrade the card, follow the instructions provided with the upgrade package.</p>
STAR-803	<p>SDI jitter may be outside specifications</p> <p>In some situations, the SDI output jitter may be outside of the timing jitter specifications (10Hz). This may occur when the input streams have too much IP packet jitter or the Output on Error Mode is set to configurable color and activated. This issue can be resolved by ensuring the SDI output is locked to a reference.</p>

STAR-720	<p>Output on Error over Test Pattern</p> <p>The Output on Error will be activated when the test pattern is enabled for a gateway and the global test pattern format doesn't match the format specified for that gateway.</p>
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